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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,399	02/09/2004	Kuo-Tai Su	MR3287-12	6605

4586 7590 02/11/2005

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ELLICOTT CITY, MD 21043

EXAMINER

MITCHELL, KATHERINE W

ART UNIT PAPER NUMBER

3677

DATE MAILED: 02/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/773,399

Applicant(s)

SU, KUO-TAI

Examiner

Katherine W. Mitchell

Art Unit

3677

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 2/9/04 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Specification***

1. The abstract of the disclosure is objected to because the marked up version is not based upon the version currently in the case. Examiner can follow the marked-up version; however, a properly marked-up version, based on the abstract submitted 2/9/04, should be marked up and submitted. Correction is required. See MPEP § 608.01(b).

The previous office action noted that the specification contained numerous grammatical errors and needed extensive, line-by-line revision. This was not done. For example, the brief description of Fig. 6, "showing the implanted stated of the present invention", page 3, line 4 "For archiving the object", page 3, line 5, "comprising of a head", page 4, lines 9 and 11 "has a base circle surface", are only a few example of unclear language.

A substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter.

### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the even number of axial slots must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

3. Claim 1 is objected to because of the following informalities:

- \* Lines 3-4 include "said thread is consisted of" which is awkward. More correct would be --said thread consists of--.

- \* Similarly, applicant has "an upper flank" and "a low flank", but to be correct, it should be --a lower flank--.

- \* "The joint line" in line 5 lacks antecedent basis.

Art Unit: 3677

\* Applicant claims an equal number of axial slots are formed in the thread, but the only figure showing the number of slots, Fig 6, shows 5 slots. Examiner is ignoring the "even" number, as it is not clear how the number is determined.

\* A "back angle" is not clear to examiner, and there is no further definition of "back angle" in the specification. An angle is considered a "back angle" if it angles back relative to another line or surface.

\* Appropriate correction is required.

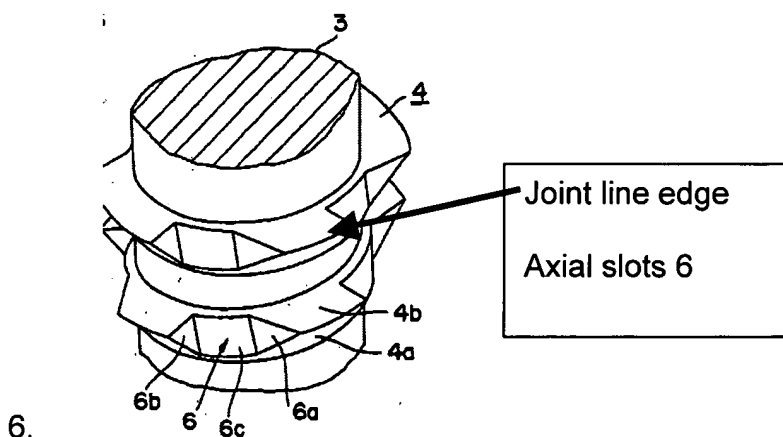
### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 1 is rejected under 35 U.S.C. 102(b) as anticipated by Hiroyuki USP 5110245,



Hiroyuki Fig 2 (above) teaches a thread forming screw comprising a head (2)

Art Unit: 3677

with an extending shank (3) and a helically formed thread (4) wherein the thread consists of an upper flank (4b), a lower flank (4a) and an edge on the joint line of the upper and lower flanks (See Fig 2 above) and an even number of axial slots (6) formed in the thread (as best understood, Fig 3 shows an even number, four, axial slots), each axial slot beveled with a back angle (formed by surface 6a, which forms an angle sloping back relative to the joint line edge) to form a tilt surface (6a is the surface, tilted

*tilt (tilt) verb*

*verb, transitive*

1. To cause to slope, as by raising one end; incline: *tilt a soup bowl*; *tilt a chair backward*.

*verb, intransitive*

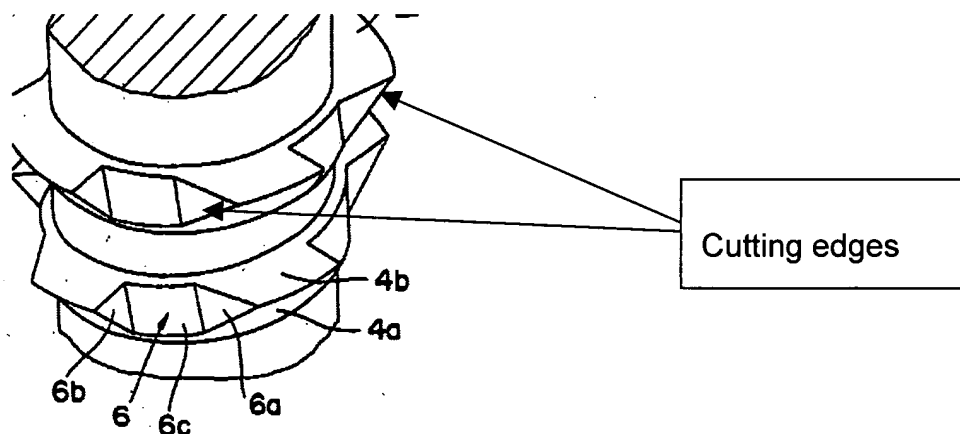
1. To slope; incline. See synonyms at *slant*.

*noun*

An inclination from the horizontal or vertical; a slant: *adjusting the tilt of a writing table*.

A sloping surface, as of the ground.<sup>1</sup>

relative to either the upper or lower flank), so as to form a cutting edge from which the low flank and tilt surface extend (see also col 4 lines 3-21 – surface 6a is leading and thus inherently the edge between 6a and the low flank will be a cutting edge.



<sup>1</sup>Excerpted from *The American Heritage Dictionary of the English Language, Third Edition* Copyright © 1992 by Houghton Mifflin Company. Electronic version licensed from Lernout & Hauspie Speech Products N.V., further reproduction and distribution restricted in accordance with the Copyright Law of the United States. All rights reserved.

***Response to Arguments***

7. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection. However, examiner notes that applicant has claimed "axial slots", not --slots arranged, with respect to other slots, along a longitudinal axis-- as applicant is arguing. Further, applicant's admitted prior art (Fig 2) clearly shows axially arranged slots as argued, so that any argument that it is this **unclaimed** feature that is novel and reads over the prior art is not persuasive.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 3677

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

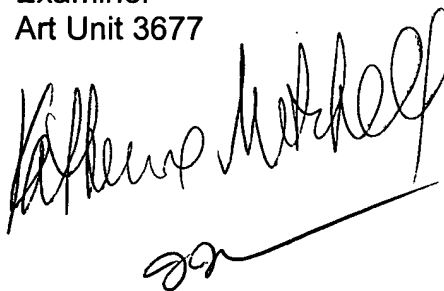
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine W. Mitchell whose telephone number is 703-305-6713. The examiner can normally be reached on Mon - Thurs 10 AM - 8 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. J. Swann can be reached on 703-306-4115. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kwm  
2/4/05

Katherine W Mitchell  
Examiner  
Art Unit 3677



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